

TABLE 1—Numbers of Adult and Larval (in parentheses) Fleas Collected from Building 2

Date	Collecting Method		
	Berlese	Dry Ice	Aspiration
Aug 5	-	-	35
Aug 8	5 (5)	2	43
Aug 10	17 (8)	4	21
Aug 15	8 (2)	1	7
Aug 17	0 (1)	0	2
Aug 19	0	0	0
Aug 22	0	0	0
Aug 24	0	0	0
Aug 26	0	0	0
Total	30 (16)	7	108

two weeks. Dry ice in white enamel pans was placed in the crawl spaces below each building. Continued collection and monitoring of fleas occurred until August 26 even though no fleas were detected in any stage after August 16.

Identification of the fleas indicated that they were cat fleas, *Ctenocephalides felis* Bouchet (Siphonaptera:Pulicidae). The number of fleas collected from Building 2 for the period August 5 to August 26 are shown in Table 1. Adult fleas comprised the majority of individuals collected (90.2 percent), whereas larvae, all from the crawl space, accounted for only 9.8

percent of the total. Only two adult fleas were collected adjacent to Building 1. The disproportionate number of flea larvae and adults collected from Building 2 suggests that adult fleas were originating from below Building 2. Both the maintenance worker and the senior author attracted fleas while under Building 2, but not while under Building 1. Most of the fleas (98.6 percent) were collected during the first four collecting dates. No flea pupae were collected.

Discussion

The most probable explanation for the greater number of fleas around Building 2 was the presence of several cats in the vicinity on several previous occasions and their continued use of the crawl space. Cats from surrounding buildings roam freely during the day and night and had been trapped near Building 2 on several previous occasions. Fur, feces, and masticated rodent remains below Building 2 further attested to the presence of cats. Cats had entered through open vent holes in the foundation and occupied the crawl space so that eventually a substantial population of fleas had built up. Since similar conditions did not exist at Building 1, very few fleas occurred near it.

Although *Ctenocephalides* spp. fleas have the potential to vector a number of

diseases,^{2,3} those collected in this case were not tested for pathogens. It was recommended that, in the future, better chemical control measures be used in a more timely manner and that all openings into the crawl spaces below each building be closed off with at least a fine mesh screen. We further suggested that trapping of free-ranging pets be continued, and leash ordinances be enforced in order to reduce or eliminate potential flea hosts. □

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Any mention of a proprietary product does not constitute an endorsement.

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Impact of Work on the Quality of Life of Community-Residing Young Elderly

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Introduction

A desire to work beyond the expected age of retirement has become more prominent in recent years.^{1,2} Predictions of labor shortages and growing competition for those willing and able to work³ has directed attention to the continued labor force participation of older people and to the potential reemployment of retirees. Maloney and Paul assert that greater opportunities to work could improve the quality of life for older people.⁴ They note that nearly half of the nonworking adults

between the ages of 55 and 64 reported that they would have preferred to continue working. Those who stopped work involuntarily said that they were less sat-

ABSTRACT

Using a random sample of 310 Massachusetts community-residing elderly between the ages of 65 and 74, this study investigates the relationship between employment status and quality of life using a modified version of the Spitzer Uniscale QL index. The odds of reporting the highest quality of life rating, after controlling for socioeconomic and health characteristics, was 3.51:1 for those who worked versus those who did not do so. (*Am J Public Health* 1991;81:498-500)

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TABLE 1—Distribution of Quality of Life Ratings

Quality of Life Rating	Total	Working	Not Working
1 (lowest)	0	0	0
2 (low)	1	0	1
3 (low middle)	0	0	0
4 (middle)	17	1	16
5 (high middle)	14	2	12
6 (high)	79	8	71
7 (highest)	199	66	133
Total	310	77	233

ified with their lives than those who chose either to continue work or to retire.

Evidence to support the hypothesis that work has a positive impact on the elderly's quality of life is limited. Most of the literature focuses on whether retirement leads to increased mental health problems.^{5–12} One study conducted by Soumerai and Avorn adopted an employment rather than a retirement focus.¹³ Based on a sample of 55 individuals (25 experimentals and 30 controls) they report higher life satisfaction index scores for the experimental (i. e. work) group.

We report here a study of the relationship between employment and quality of life among those elderly who are most likely to be interested in working—those in the age group 65 to 74.

Methods

The Sample

Our data come from a representative sample of Massachusetts community elderly assembled by the Department of Social Gerontological Research, Hebrew Rehabilitation Center for Aged which spans the period 1982–87 (baseline $n = 2,682$). The sample was constructed by: dividing the state into its 27 home care areas; stratifying areas by size (small, medium, and large) and randomly selecting cities and towns from each area; and randomly selecting for each selected area residents 60 years of age and older from within two age strata (under 70 and 70 and over) from the state census. Data in the sample were obtained through telephone interviews.

The analysis in this study is limited to 1987 data and to individuals under age 75 in 1987 ($n = 351$). Individuals not in a community setting ($n = 24$) or who never worked ($n = 17$) were excluded, leaving a study sample of 310 people: 77 employed (24.8 percent) and 233 (75.2 percent) not

TABLE 2—Factors Associated with the Odds of Reporting the Highest Quality of Life Rating

Variables	Odds Ratio (95% CI)
Sex	1.02 (0.57, 1.81)
Marital Status	1.41 (0.79, 2.53)
Self-Assessed Health Status	3.39 (1.78, 6.48)
Functional Status	8.29 (2.18, 31.48)
Self-Assessed Financial Status	1.55 (0.88, 2.74)
Work Status	3.51 (1.67, 7.34)
CI = Confidence Interval	

employed. The mean age of these two groups was 69.8 years ($SD \pm 2.3$) and 70.3 years ($SD \pm 2.3$). Among those employed, 21 (27.3 percent) worked full-time and 56 (72.7 percent) part-time.

Study Variables

Quality of life, the study's dependent variable, was measured by a self-reported, broad-based, well-established measure—the Spitzer Uniscale QL index—using the scoring metric developed by Morris and Spitzer for use in a general community population. The Uniscale QL has been used with a number of different elderly populations including those with and without serious disabilities,^{14,15} and has high interrater reliability and excellent validity properties when compared against other quality of life indicators.¹⁴ It is described in Appendix A.

The independent variables used were: sex, marital status, a self-assessed overall health rating, functional status, a self-assessed rating of financial status, and work status. The coding of these variables and their descriptive statistics are reported in Appendix Table A2.

Results

Quality of Life Rating by Work Status

The distribution of quality of life ratings are reported in Table 1. Approximately 90 percent of the sample reported quality of life ratings in one of the two top categories. By work status, 85.7 percent of the working elders (95% CI = 77.9, 93.5) reported the highest quality of life rating compared to 57.1 percent of the nonworking elders (95% CI = 50.7, 63.5). Focusing on the two highest quality of life ratings, 96.1 percent of the working elders (95% CI = 91.8, 100) were in this range compared to 87.6 percent (95% CI = 83.4, 91.8) of the nonworking elders. No signif-

icant differences emerged in a separate analysis of quality of life ratings by extent of work (i.e. full- or part-time).

Impact of Work on Quality of Life

Logistic regression was used to assess the impact of the independent variables on the likelihood of reporting the highest quality of life rating of 7 versus ratings of 1 through 6. The odds ratios associated with each of these variables are reported in Table 2. Three variables display definite impacts—self-assessed health, functional status, and work status. Adjusting for other factors included in the analysis, the likelihood of an elderly person who is working either full-time or part-time displaying the highest quality of life rating is 3.51 times that of an elderly person who is not working.

Discussion

Two health-related factors emerged as associated with the highest quality of life profile: self-assessed health, and functional independence. Working also emerged as a very important element. While work produces extra income to supplement Social Security and pension or investment income, financial security per se was not a significant correlate of a very high quality of life profile. We suggest that the feeling of “usefulness” and “value” traditionally associated with having a job underlies the work-quality of life relationship reported here.

Our results, which clearly await replication from studies that span a broader geographic base and time horizon, indicate that efforts at improving the life of the growing number of “young elderly” (i. e. people in the 65–74 age range) encompass programs that help people over the age of 65 stay on their current job or find new employment that better meets their current needs and capabilities. Such efforts

will contribute to the improved social and mental health of the elderly. □

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APPENDIX

In its self-report version, Uniscale QL scores quality along a seven-category continuum based on a response to the following question: "How would you rate your overall quality of life? Think of a ladder with 7 rungs, where the first, lowest rung applies to someone completely dependent physically on others, seriously impaired mentally, unaware of surroundings, and in a hopeless position. At the top of the ladder, the 7th rung applies to someone physically and mentally independent, communicating well with others, able to do most of the things enjoyed, pulling one's own weight, with a hopeful yet realistic attitude. Where would you place yourself on this 7-rung ladder?" The distribution of the self-report Uniscale QL index for a representative sample of community elders in Massachusetts is reported in Table A1.

TABLE A1—Uniscale QL Distribution for A Representative Sample Of Community Elders in Massachusetts (N = 1,582) (in percent)

QL Rating	Total Sample	Extent of Functional Disability		
		No ADL/IADL Deficit	IADL Deficit/ No ADL Deficit	ADL Deficit
1 (lowest)	0.8	0.1	0.3	11.2
2 (low)	0.6	0.0	0.5	8.8
3 (low middle)	1.3	0.1	5.1	10.5
4 (middle)	4.6	3.7	7.0	12.0
5 (high middle)	20.1	16.3	40.5	33.4
6 (high)	32.2	33.9	31.9	8.7
7 (highest)	40.4	45.9	14.7	15.4
(% of sample)		(82.6)	(11.7)	(5.7)

TABLE A2—Coding of Independent Variables and their Descriptive Statistics

Variable	Coding	Mean	Standard Deviation
Sex	1 = Female 0 = Male	0.558	0.497
Marital Status	1 = Married 0 = Not married	0.600	0.491
Self-Assessed Health Status	1 = Excellent or good 0 = Fair or poor	0.781	0.414
Functional Status	1 = Independent 0 = Dependent ^a	0.919	0.273
Self-Assessed Financial Status ^b	1 = Good 0 = Fair or poor	0.687	0.464
Work Status	1 = Working 0 = Not working	0.248	0.433

N = 310 except for functional status where n = 309.

a) Dependent in either personal activities of daily living and/or instrumental activities of daily living.

b) Data for this variable were drawn from the responses to the following question: "Would you say that you have enough money to live on with little trouble, just enough to get by, or not enough to make ends meet?" These responses were characterized as good, fair or poor, respectively.